K21U 0099

Reg. No. : .....

Name : .....

VI Semester B.Sc. Degree (CBCSS – Reg./Supple./Improv.) Examination, April 2021
(2014-2018 Admissions)
CORE COURSE IN COMPUTER SCIENCE
6B14CSC : Data Communications and Networks

Time : 3 Hours Max. Marks : 40

SECTION – A

1. One word answer : **(8×0.5=4)**
   a) BNC stands for _____
   b) In star topology, each device has a dedicated point to point link only to central controller called a _____
   c) The process of adding 1 extra byte whenever there is a flag or escape character in the text is called _____
   d) ACKs and NAKs are included in the data frame in a technique called _____
   e) Token buckets allow _____ traffic at a regulated maximum rate.
   f) Port number of HTTP is _____
   g) URL stands for _____
   h) Public key cryptography is also called _____

SECTION – B

Write short note on **any seven** of the following questions : **(7×2=14)**

2. Define computer network.

3. Write any two advantages and disadvantages of mesh topology.

P.T.O.

4. List any four functions of the data link layer in the OSI model.

5. Draw the diagram of stop and wait protocol.

6. Differentiate between leaky bucket and token bucket.

7. What is a LAN ?

8. Write any four TCP services.

9. If UDP is powerless, why would a process want to use it ?

10. What do you mean by cryptography ?

11. What are substitution ciphers ?

12. What is meant by congestion ?

13. What is multicasting ?

14. Write about frames.

15. List two methods providing network security.

SECTION – C

Write short note on **any four** of the following questions : **(4×3=12)**

16. Explain about line configuration.

17. Differentiate between analog and digital data transmission.

18. Explain the application layer of OSI model.

19. Write about the adaptive principle of routing algorithms.

20. Write about design issues of transport protocol.

21. Briefly explain Data Encryption Standards.

22. Differentiate between parallel and serial transmission.

23. What is service point addressing ?

SECTION – D

Write short note on **any two** of the following questions : **(2×5=10)**

24. Explain the OSI reference model.

25. Explain Dijkstra's shortest path algorithm.

26. Explain TCP.

27. Explain RSA algorithm.

28. Explain TCP/IP reference model.

29. Describe guided media.